DelRay

Installation Operation & Maintenance

Rio

Double Burner Pedestal Gas Stove

Model DFSP

Check local codes and read all instructions prior to installation.

- *Installer: Leave this manual with the appliance.*
- *Consumer: Leave this manual for future reference.*

Warning:

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual. For assistance or additional information consult a qualified installer, service

For Your Safety:

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any

What To Do If You Smell Gas:

- *Do not try to light any appliance.*
- *Do not touch any electrical switch; do not use any phone in your building.*
- *Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.*

CERTIFIED

DESIGN CERTIFIED

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CAUTIONS

Due to its high operating temperatures, the appliance should be located out of traffic & away from furniture and draperies.

- Children and adults should be alerted to the hazards of the high surface temperature, which could cause burns or clothing ignition.
- Young children should be carefully supervised when they are in the same room as the appliance.
- Clothing or other flammable materials should not be placed on or near the appliance.

Introduction

About the Rio Pedestal Stove:

Thank you for purchasing the Rio Pedestal Stove, and choosing a Delray Gas Product. This Rio Stove features a Double Burner with a hi-lo adjustable control.

This Rio Stove is certified for use with Montigo Direct Vent Components, and for use with standard 4" B-Vent when using our optional conversion kit (part number FSTK03). The Rio Pedestal Stove is certified as a heating appliance by CGA and AGA tothe Vented Gas Fireplace Heater standard (ANSI Z21.88-2005 · CGA 2.33-2005) and is rated for:

Natural Gas	25,000 BTU/H Maximum Input
	18,500 BTU/H Minimum Input
Propane	22,000 BTU/H Maximum Input
	17,000 BTU/H Minimum Input

How to use this manual:

This manual covers installation, operation and maintenance. Lighting, operation and care of this fireplace can be easily performed by the homeowner. However, all installation and service work should be performed by a qualified or licensed installer, plumber, or gasfitter who is qualified or licensed by the state, province, region, or governing body in which the appliance is being installed.

Warranty and Installation Information:

The Montigo warranty will be voided by, and Montigo disclaims any responsibility for, the following actions:

- Modification of the fireplace and/or components including Direct-Vent assembly or glass doors.
- Use of any component part not manufactured or approved by Montigo in combination with this Delray fireplace system.
- Installation other than as instructed in this manual.

Consult your local Gas Inspection Branch on installation requirements for factory-built gas fireplaces. Installation & repairs should be done by a qualified contractor.

Installations in Canada must conform to the current CAN/CGA B-149.1 and .2 Gas Installation Code and local regulations. If the optional air-circulating fan kit is installed, it must be electrically grounded in accordance with CSA C22.1 Canadian Electrical Code Part 1 and/or Local Codes.

Installations in the USA must conform to local codes, or in the absense of local codes to the National Fuel Gas Code, ANSI Z223.1-1988. If the optional air-circulating fan is installed, it must be grounded in accordance with local codes or, in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70-1987. See Appendix C for fireplace installations within the State of Massachusetts.

Installation

Choosing a Location

The fireplace may be installed in any location that maintains clearances to air conditioning ducts, electrical wiring and plumbing. Safety, as well as efficiency of operation, must be considered when selecting the fireplace location. Try to select a location that does not interfere with room traffic, has adequate ventilation, and offers an accessible pathway for vent installation. Refer to page 4 - Vent Installation for more information.

The Rio's dimensions are shown below:

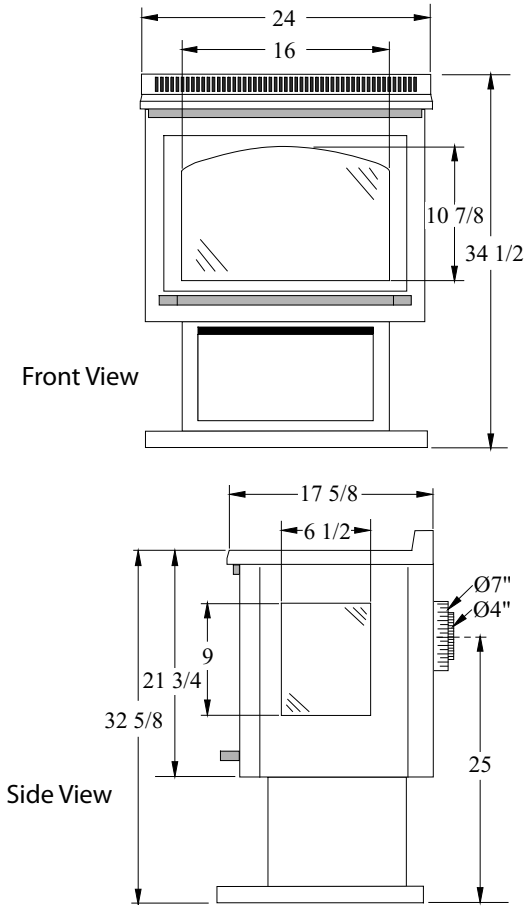


Figure 1. Stove dimensions.

Clearances

The Rio Pedestal Stove's clearances to combustible materials are:

A - Back	1 ½"
B - Side	10 ½"
C - Floor	0"
D - Top*	42"

* Clearance from the top of the stove to a combustible ceiling.

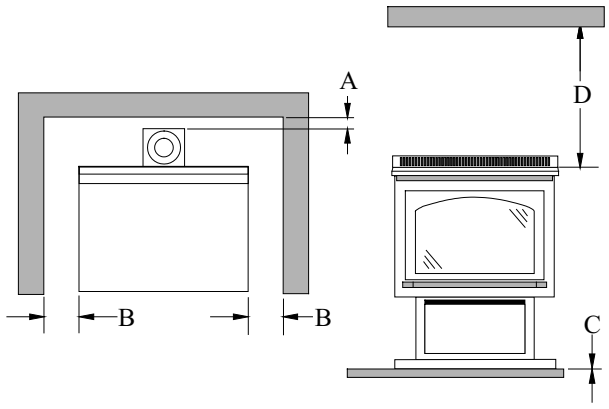


Figure 3. Clearances to combustible surfaces.

When installing this stove in an alcove, the minimum clearance from the top of the stove to a combustible surface is 42". (Minimum 1" clearance must be maintained around the vent pipes.)

Installation Direct Vent

Installing The Gas Line

The gas line must be installed before completing the installation. Natural Gas requires a minimum inlet gas supply pressure of 5.5" W.C. & a manifold pressure of 3.5" W.C. Propane Gas requires a minimum inlet gas supply pressure of 11" W.C. & a manifold pressure of 10" W.C. Provision must also be made for a 1/8" N.P.T. plugged tapping and be accessible for test gauge connection immediately upstream of the gas supply controls to the appliance. The stove is supplied with a flexible gas connector which is factory installed. The gas valve is located behind the pedestal base, and is accessible from the back or by removing the control panel cover plate. It should be attached to the gas line with an approved fitting, as required by the applicable installation codes.

• Only use gas shut-off valves approved for use by the state, province, region, or governing body, in which the appliance is being installed, or as required by the applicable installation codes.

• Flexible gas connectors must not exceed 3 feet in length, unless it is allowable within applicable installation codes.

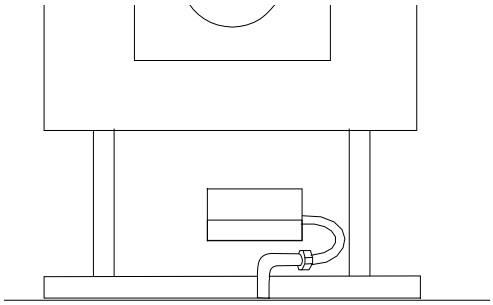


Figure 4. Gas line access.

During any pressure testing of the gas supply piping that excedes 1/2 psig (3.5 kPa), the appliance and its individual shutoff valve must be disconnected from gas supply system.

When pressure testing the gas supply piping system at test pressures of less than or equal to 1/2 psig (3.5 kPa), the appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve.

Note: After gas line is connected, each appliance connection, valve and valve train must be checked while under normal operating pressure with either a liquid solution, or leak detection device, to locate any source of leak. Tighten any areas where bubbling appears or leak is detected until bubbling stops completely or leak is no longer detected. DO NOT use a flame of any kind to test for leaks.

Direct Vent Installation

This section covers the installation of venting and terminations.

Installation Requirements

- Rio Stoves are certified for use with Montigo Standard Series (4" / 7") venting components and approved Vent Kits (listed below)
- Minimum 1" clearance to combustibles required for vent pipes
- Use only certified Montigo vent components. (Use of other parts will void the Montigo warranty, and may impede the operation of the stove.)
- All joints must be secured with a minimum of two screws per joint
- Vent terminations must not be recessed in walls or siding
- Horizontal runs must be supported by a minimum of two supports per horizontal run. A minimum of one screw on each side of support is also required
- Flex vent sections may be stretched up to 50% of their total length (eg. a 24" section may be stretched to 36")
- Maximum horizontal run for a flex section with no vertical rise is 3 feet.
- Flex vent sections over 3 feet must fall within the limits set by the venting graph and must have a minimum vertical rise of 3 inches per foot of flex.
- Venting components can be used in any combination of solid/rigid
- Solid vent sections may be cut less than half way from the tapered end
- Venting components can be used in any combination of solid/rigid pipe or flex pipe and in any orientation (Male connectors can face in any direction)

Vent Terminations

Selecting A Termination Location

Choosing your vent termination location will help to determine whether

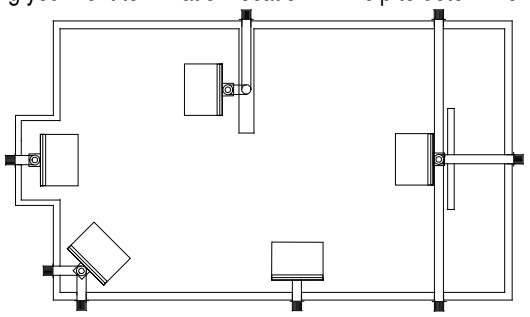


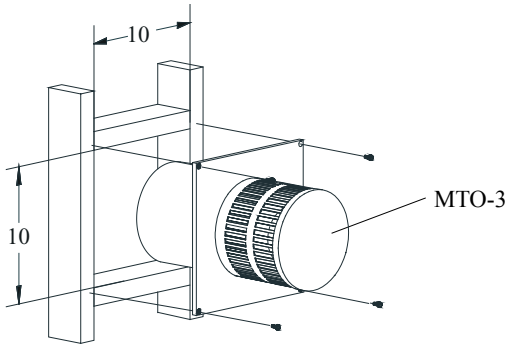
Figure 5. Fireplace locations and vent terminations.

Cautions:

- Vent terminations can be very hot. If the termination is less than 7 feet above a public walkway, it should be fitted with a certified Montigo Heat Guard. (Part no. MTKOG)
- Do not obstruct, or attempt to conceal, the vent termination. These actions will affect the operation of the fireplace, and may be hazardous.
- In heavy snow areas, take extra care to prevent snow buildup from obstructing the vent termination.

Installation Direct Vent

Installing Terminations with Built-In Frames

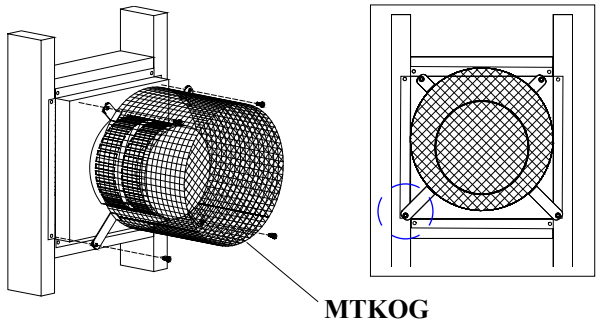


1. Frame the termination opening to 10" x 10".
2. Fasten the termination to the studs using a minimum of 4

Installing Rio 'Snorkel' Terminations

See Rear Vent Venting Runs section for Snorkel Installations.

Installing Heat Guards over Terminations



1. Ensure that the two long mounting brackets are facing the bottom of the termination. (See inset). This will provide more heat protection at the top of the termination, where temperatures are highest.
2. Attach to the faceplate of the termination using four sheet metal screws.

Rear Vent Venting Runs

The Rio Pedestal Stove may be vented directly out the back through an exterior wall. This application allows the stove to be installed with no visible venting in the room. You must use the Direct Vent - Rear Vent Kit (Part # FSTK01) for this installation.

Rear Vent Installation Requirements.

- The height from the hearth to the center of the vent pipe is 25".
- The maximum horizontal run for a Rear Vent installation is 14".
- The FST-11 (18" length section is supplied for connecting the stove to the termination. The FST-11 may be cut to required length, and must not exceed 14".
- The two wall plates and the cover plate included with this kit must be installed for proper operation.

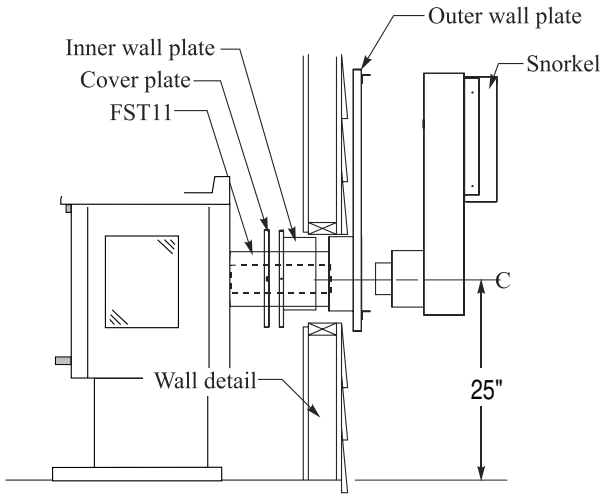


Figure 6. Rear Vent installation, showing the required components and the height of the stove's flue collar.

Installation.

1. Mark an 11" x 11" hole centred exactly 25" from the centre of the stove's flue collar to the hearth (- the surface the stove will be sitting directly on). This hole will be cut right through to the exterior of the building for the vent pipe to pass through. Precise location of this hole is very important: check your measurements before cutting!
2. Connect the FST11 to the back of the stove, but do not fasten it. Slide the cover plate and the inner wall plate onto the FST11, with their open edges down.

   Place the stove on its hearth, and slide it back until the FST11 pipe protrudes through the hole in the wall and the stove is in the desired position. (See figure 7).

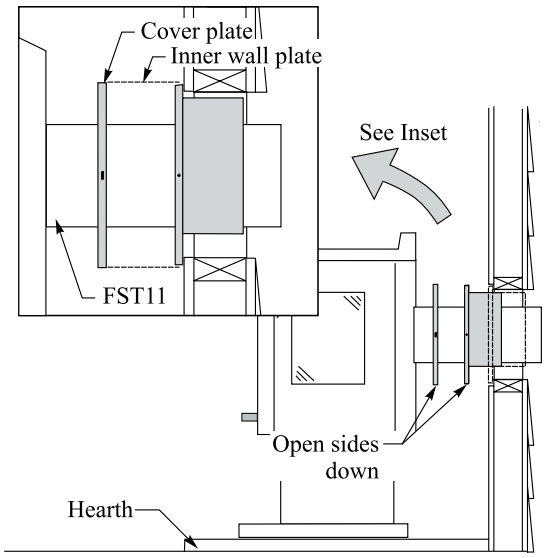


Figure 7. Installiing the inner wall plate and cover plate.

Installation Direct Vent

Slide the inner wall plate back against the wall. Level the plate, making sure it completely covers the opening in the wall, and fasten it in place using four wood screws. (Note that the heat shield connected to the plate is not concentric -- its top edge should sit close to the inside top edge of the 11" x 11" hole.)

Slide the Cover Plate onto the inner wall plate and fasten it with one black sheet metal screw on each side.

3. The (outer) wall plate is used to mount the snorkel-type termination to the building exterior. Position the wall plate over the 11 " x 11" hole.

   Push the heat shield portion into the opening so that it mates with the heat shield on the inner wall plate. This will properly position the wall plate over the opening. (Refer to figure 8).

   Level the wall plate. It may be installed either over top of the exterior cladding (brick, stucco, siding, etc.), or against the exterior sheathing. If installing it directly on the exterior sheathing, you must cut away the siding or other fascia by tracing an outline around the wall plate.

4. Slide the stove forward and remove the FST11 pipe. Attach the FST11 to the snorkel termination, and mount the assembly on the outer wall plate between the two alignment tabs as shown in figure 9. Fasten it in place with at least two screws at the top and two at the bottom.

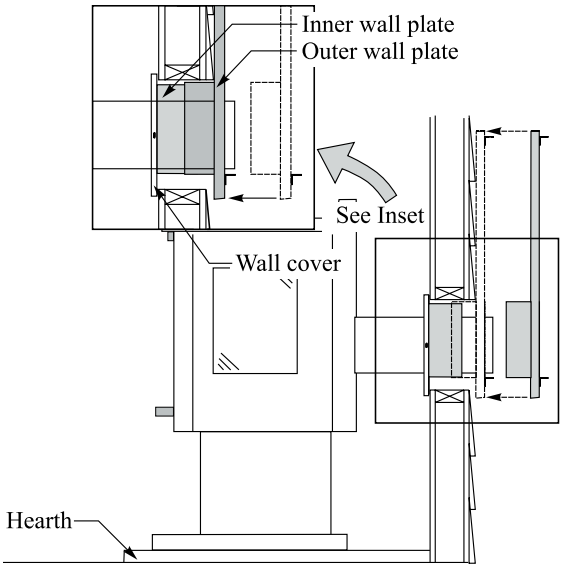


Figure 8. Installing the outer wall plate.

5. Install the rain shield onto the top of the outer wall plate as shown in figure 10. Run beads of caulking, also shown in figure 10.
6. If necessary, cut the FST11 pipe to the required length, and then slide the stove back into position and connect it to the FST11. Refer to figure 11.

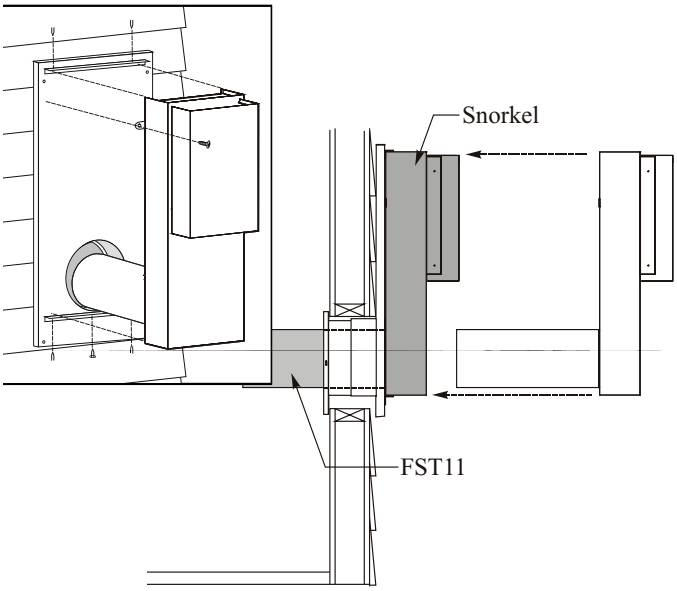


Figure 9. Attaching the snorkel termination to the outer wall plate.

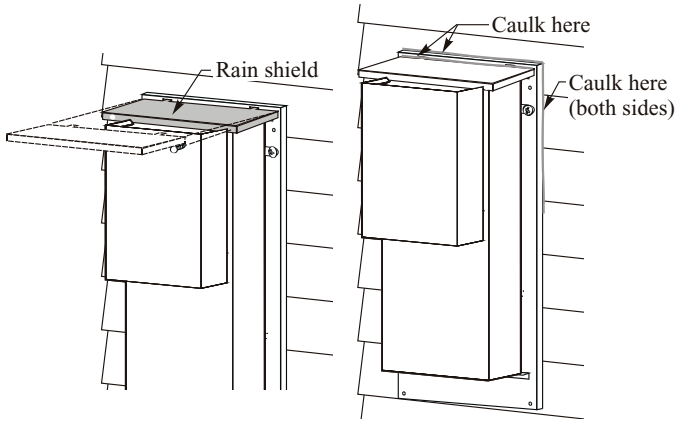


Figure 10. Installing the rain shield and applying silicone sealant.

Figure 11. Mating the stove to the FST11 and snorkel termination.

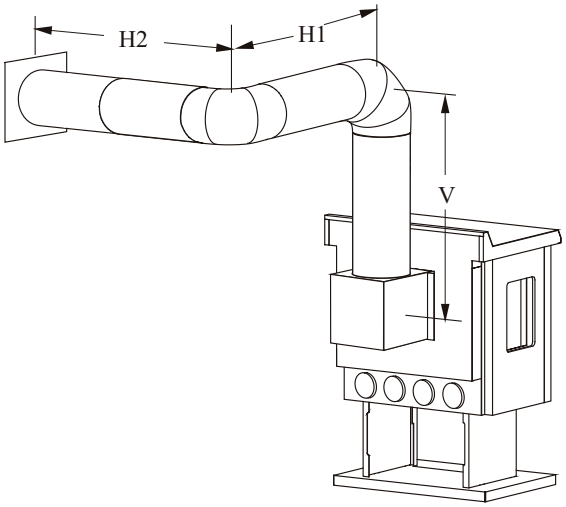
Installation Direct Vent

Top Vent Venting Runs

For the Rio Pedestal Stove there are two types of Top Vent (DV) installations: A) Horizontal (Through-The-Wall) Installations and B) Vertical (Through-The-Roof) Installations.

Allowable Vent Runs

Before you install any venting, you must determine whether the venting run will be acceptable. Unacceptable venting can affect the fireplace's combustion. Figure 12 shows various vent rises and the corresponding number of 90° bends which can be made.



The minimum vertical rise for a Top Vent Installation is 2', which allows 1 - 90° elbow and a maximum horizontal run of 10'. With greater vertical rise, the number of 90° bends may be increased according to the chart below. The total maximum horizontal run (H^T) is also shown, and the run between each elbow (H^x) may be any length, as long as it does not exceed (H^T).

Vent Rise[1] (V)	Max. # of elbows	Max. Horiz. Run (H^T)
2' (min.)	1	10'
4'	2	10'
5'	2	10'
10'	3	10'
15'	3	10'
20'	3	10'
25' (max.)	See vertical vent section	

[1] Vertical rise is measured from the center of the stove's flue collar to the center of the termination.

[2] See 'Through-the-Roof Installations'

Figure 12. Venting limitations for top vent installations.

Example:

If V= 12', the vent run may use up to 3 - 90° elbows.
If H^1= 3', H^2=2', and H^3=3',
then H^T=8'.
This would be an acceptable installation.

A) Through-the-Wall (Horizontal) Venting Option

The horizontal venting option requires an FSTK02 Vent Kit. Figure 13 shows the components which are used to attain different vent heights. Additional stove pipe or Montigo Standard Series vent components may be used to increase the vent run, as long as the run still falls within the limits set out in Figure 12.

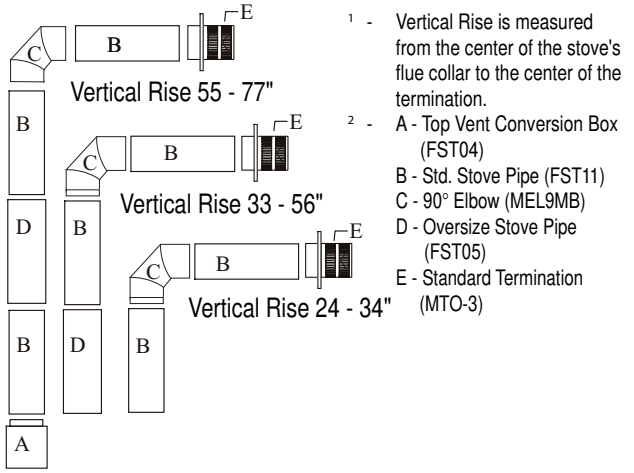

Vertical Rise 55 - 77"
Vertical Rise 33 - 56"
Vertical Rise 24 - 34"
A
B
C
D
E
[1] - Vertical Rise is measured from the center of the stove's flue collar to the center of the termination.
[2] - A - Top Vent Conversion Box (FST04)
B - Std. Stove Pipe (FST11)
C - 90° Elbow (MEL9MB)
D - Oversize Stove Pipe (FST05)
E - Standard Termination (MTO-3)

Figure 13. Possible venting configurations using the FSTK02 kit.

Installing the Stove Pipe

1. Ensure that the intended pathway for the venting is clear.Try to position the stove midway between two studs to avoid having to cut them. Cut and frame a 10" x 10" hole for the termination.
2. Attach the top vent conversion box (Part # FST04) to the stove's flue collar as shown in Figure 14. Secure it with four sheet metal screws.

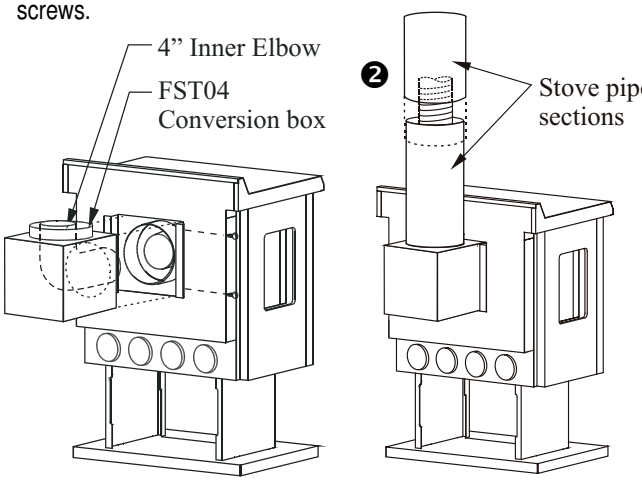


Figure 14. ❶Attaching the top vent conversion box. ❷ Installing the stove pipe.

3. Cut the flex pipe (Part # FST08) to length and install the second flex collar. Install the flex liner onto the inner collar of the conversion box.

Installation Direct Vent

4. Install the first stove pipe onto the conversion box by sliding it over the flex pipe (refer to Figure 14). Install a spacer spring around the flex liner. Secure the pipe with at least two ½" hex screws spaced approx. 3/4" from the joint. Slide the remaining vertical stove pipes into place, without fastening them. Install a spacer spring inside each stove pipe section.
5. Cut the horizontal stove pipe (FST11) to length. Slide it and the 90°elbow over the flex and onto the vertical pieces of stove pipe. Install the last spacer spring inside the horizontal section. Slide the Decorative Wall Plate (Part # FST07) onto the horizontal section, making sure the unpainted side faces the wall.

Completing the Vent Run

6. Slide the stove back into position so the pipe protrudes through the wall. Pull the flex forward and attach it to the termination (or other vent sections, if necessary, to extend the vent run) with high temp sealant. Run a bead of high temp sealant around the stove pipe and push the termination on. Attach the MTO-3 termination to the wall as shown on page 5.

   Adjust the position of the stove pipes so thethat joints are all equally spaced. Ensure that there is at least 1 1/2" overlap between each section.

   Secure each stove pipe joint with at least three ½" hex screws spaced approx. 3/4" from the joint (so that the brass ring will cover both the joint and the screws).

Finishing

7. Now slide the Decorative Wall Plate against the hole, level it, and secure using four screws.
8. Cover each joint in the stove pipes with a brass decorator ring. The rings should cover the joint as well as the sheet metal screws. Attach the ring using the black 3/8" screws provided. Make sure the screw is facing the back of the stove. See Figure 15.

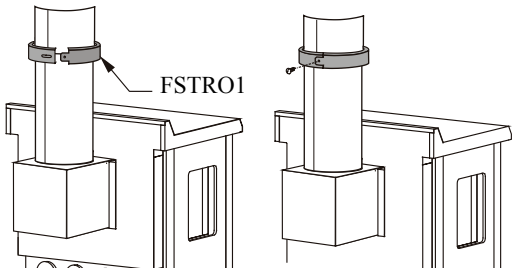


Figure 15. Installing the decorative brass rings.

B) Vertical (Through-The-Roof) Venting Option

When venting through the roof, use an FSTK04 Vent Kit. Additional stove pipe or Montigo Standard Series vent components may be used to increase the vent run, as long as the run still falls within the limits set out in Figure 16.

Vertical Vent Requirements:

Vertical terminations (Part # MVTK-1) must be installed:

- minimum 2' above the highest point where the vent passes through the roof
- minimum 6' from a mechanical air inlet
- minimum 18" from a parapet wall

Maximum vent height is 25 above the stove's flue collar.

(Note: Flame characteristics may change if the maximum vent height is used.)

A maximum of two offsets (each offset has two 90° bends) may be made. The total length of the offset(s) must not be more than 25% of the vertical vent height, when measured from center to center of the piping.

Example: Vertical vent height - 20 feet
25% of 20' = 5' max. offset allowed
2 - 2' offsets required = 4' offset
This vent configuration is acceptable.

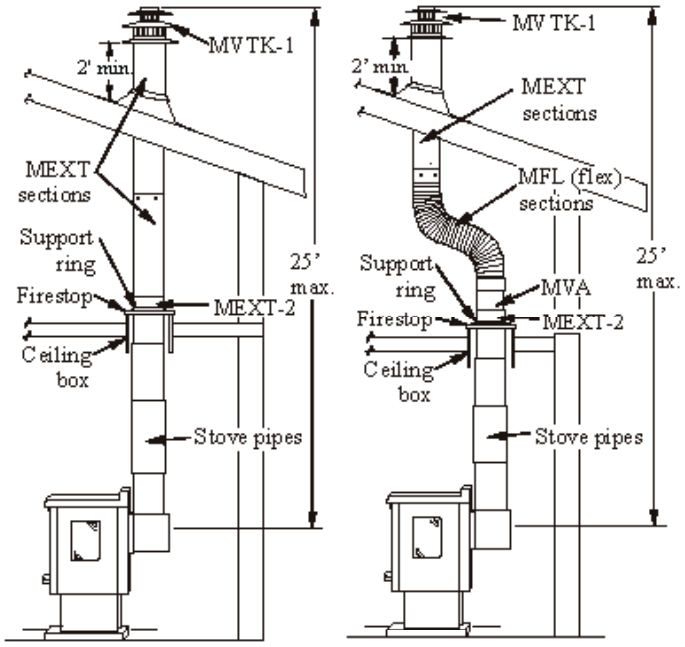


Figure 16. Verticalinstallationoptions.Left:straightverticalinstallation (no offsets).

Installation Direct Vent

Installing the Stove Pipe

1. Ensure that the intended pathway for the venting is clear.Try to position the stove midway between two joists to avoid having to cut them. Cut and frame a 11" x 11" hole in the ceiling and roof as required.
2. Install the ceiling box as shown in Figure 17. Ensure that there is at least 2" clearance from the bottom of the box to the ceiling. Fasten in place with 2 screws per side.
3. Slide the MEXT-2 down into position so the male end protrudes into the room below the ceiling box as shown in Figure 17 and secure it temporarily with an MSPXT-7 support plate and ring.

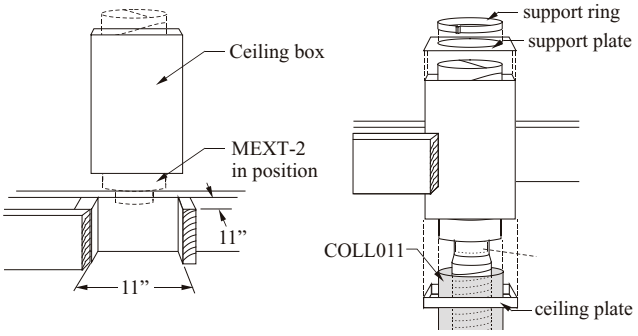


Figure 17. Installing the ceiling box.

4. Measure the flex pipe (Part # FST08) and cut it to the required length. Install the second collar onto the end of the flex. Attach one end of the flex to the inner collar of the MEXT-2, and secure it with three screws.
5. Slide the decorative ceiling plate about two inches down from the end of the top section of stove pipe. Install the top stove pipe onto the outer collar of the MEXT-2. Now slide the decorativeceiling plate up against the bottom of the ceiling box and secure it with four screws. Install the first spacer spring by sliding it up over the flex and into the bottom of the stove pipe.
6. Now slide the slip section (Part # FST05) up over the flex, overlapping the top section at least half its length to keep the pipe out of your way. Install a spacer spring inside the slip section. Slide the last section of standard stove pipe up inside the slip section, again overlapping the two by at least half a pipe length.
7. Attach the top vent conversion box (Part # FST04) to the stove's flue collar as shown in Figure 18. Secure it with four sheet metal screws.

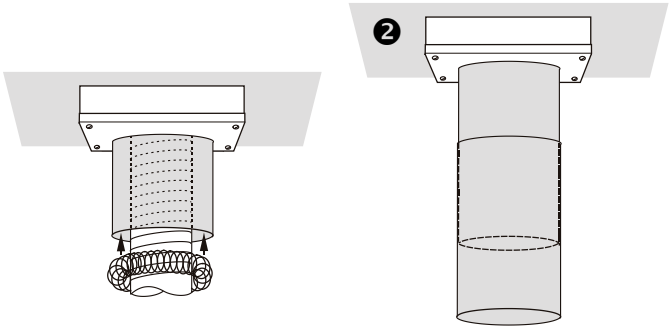


Figure 18. ❶Installing spacer springs. ❷ Installing the slip section.

8. Move the stove into position below the stove pipe. Slide the bottom section of stove pipe down over the collar on the top vent conversion box. Install a spacer spring inside this section.
9. Slide the last section of stove pipe down over the bottom pipe. Adjust the position of the stove pipes so thethat joints are all equally spaced. Ensure that there is at least 1 1/2" overlap between each section.
10. Secure each stove pipe joint with at least three ½" hex screws spaced approx. 3/4" from the joint (so that the brass ring will cover both the joint and the screws).
11. Finishing

    Install the ceiling collar over the ceiling box to provide a finished look.

    Cover each joint in the stove pipes with a brass decorator ring. The rings should cover the joint as well as the sheet metal screws. Attach the ring using the black 3/8" screws provided. Make sure the screw is facing the back of the stove. See Figure 15.

12. Completing the Vent Run

    Run additional components as necessary to bring the venting up

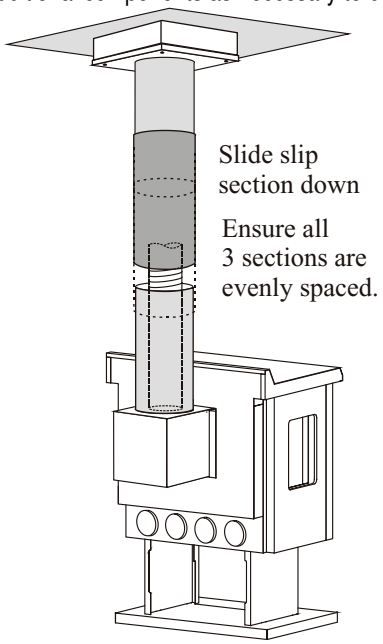


Figure 19. Positioning and fastening the stove pipes.

B-Vent Installation

This Rio Stove is certified for use with standard B-Vent, when installed using Montigo's optional B-Vent Conversion Kit (part # FSTK-03), and provided the following steps are carefully followed. Stove Pipe, Liner, and B-Vent are not included with the kit. Refer to Step 5.

When vented with standard 4" B-Vent, the B-Vent is installed directly onto the draft hood assembly. Covering the B-vent with stove pipe is optional for this installation. When vented using 4" flex liner, the flex must be covered with stove pipe.

Refer to the current CAN/CGA B-149.1 and .2 or ANSI Z223.1-1988 Gas Installation Code for B-Vent installation regulations.

1. There are four relief pots on the back of the stove body. For B-Vent Installations only, these pots must be removed to provide adequate combustion air. (See Figure 20.)

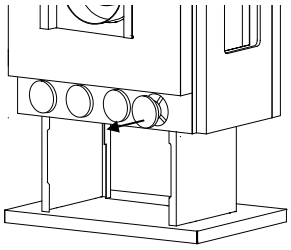


Figure 20. Removing the relief pots on B-Vent Installations.

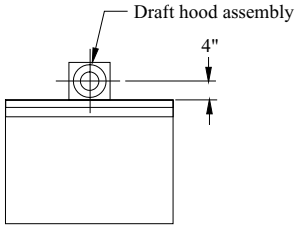


Figure 21. Location of the flue collar on the draft hood, for determining the location of the ceiling opening.

2. Check to ensure that the path for venting is clear. Try to position the stove midway between two joists to avoid having to cut them. Cut and frame an opening centered over the vent collar on the draft hood (see Figure 21).
3. Attach the draft hood assembly to the back of the stove and secure with four sheet metal screws as shown in Figure 22.

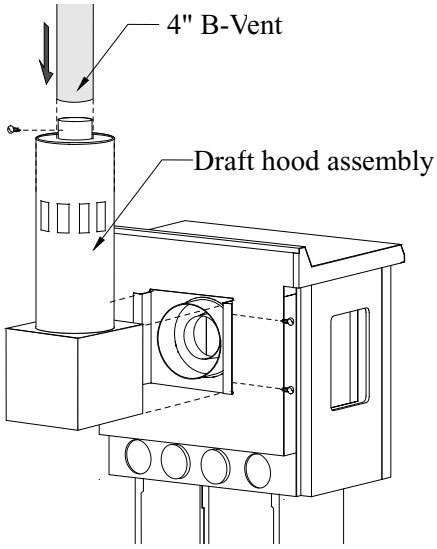


Figure 22. Attaching the draft hood assembly and the first B-Vent section.

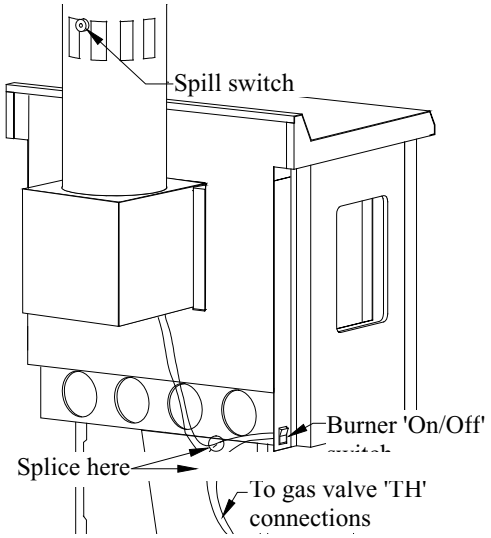


Figure 23. Wiring the draft hood spill switch into the millivolt circuit.

4. Caution: This stove is shipped ready for direct vent installation. For B-Vent installations, the following wiring change must be made.
   - Gently pull the spill switch wires from the bottom of the draft hood, and splice them into the On/Off switch circuit. The switch should be wired in series as shown in Figure 23.
5. Montigo offers a complete range of stove pipe and flex liner for completing the installation. Available components are listed in Appendix B - Venting Components:

Refer to the installation instructions supplied with the FSTK03 for more information. When using other brands of stove pipe or liner, refer to the vent manufacturer's installation instructions.

CAUTION:

- Test your B-Vent installation after completion to ensure that no combustible by-products are spilling from the draft hood opening. This draft test should be performed after a fifteen (15) minute warm up period. The manufacturer will not be responsible for any installations with inadequate draw.

Installation

Removing and Installing the Door

Removing the decorative door cover:

The door cover is held in place by two clips at the top, and two pins on the botton. Locate the latch shown in figure 24 and pull down. While holding the latch down, pull the cover out at the bottom and then downward until the clips at the top are clear. (See figure 24.)

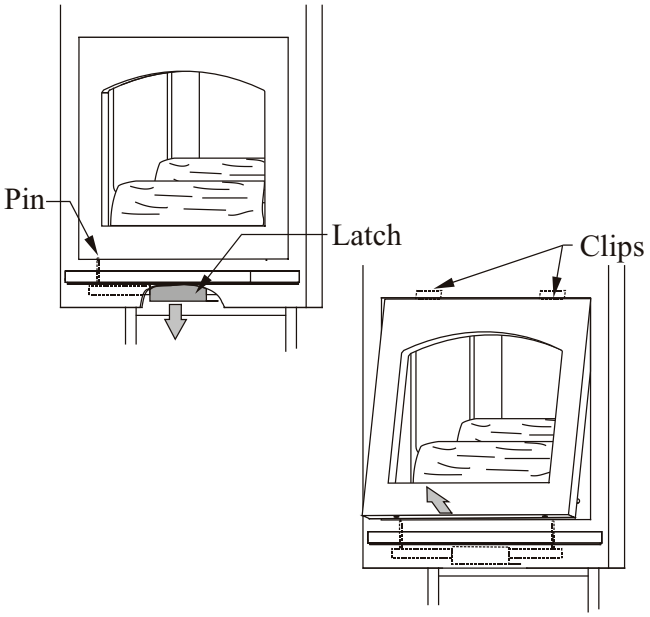


Figure 24. Removing or installing the door cover.

Removing the door:

Remove the 8 nuts around the edge of the glass door, and then pull the door outwards and upwards until it is clear of the door rail.(See Figure 25). Ensure that a good seal is maintained when re-installing the door.

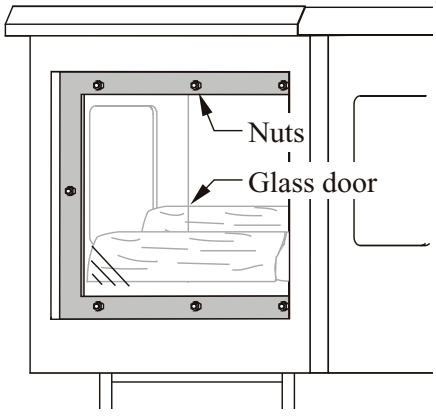


Figure 25. Removing or installing the glass door.

Installing the Log Set

Installing the Logs:

The double burner Rio Stove is supplied with six (6) fibre logs. Unpack the logs and handle them very carefully.

1. Remove the door cover and the glass door.

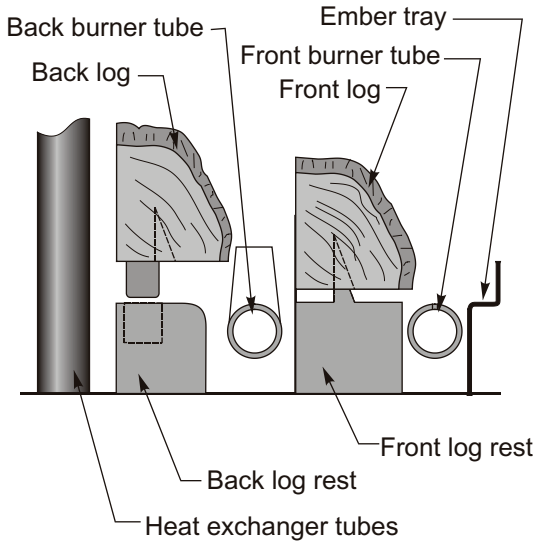


Figure 26. Positioning for the top logs ('C' and 'D').

2. Unpack the logs. Be sure to handle the logs carefully, as they are very fragile.
3. Place the Back log onto the back log rest as shown below in figure 26. The log has lip on the bottom which fits into the slot on the log rest.
4. Place the Front log onto the front log rest as shown in figure 26. Center the log from side to side, and push it against the back of the log rest. Carefully push the log onto the metal spikes on the log rest.
5. Place the top logs in position as shown in figures 27 and 28.
6. Start the fireplace. If the flame appears satisfactory, replace the glass door and door cover.

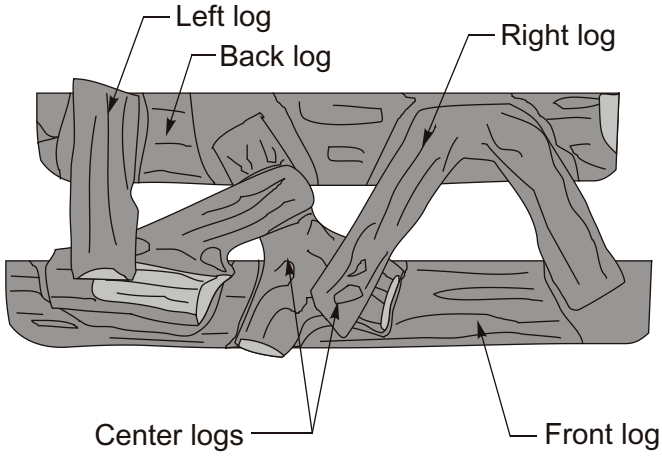


Figure 27. Proper placement (top view).

Installation

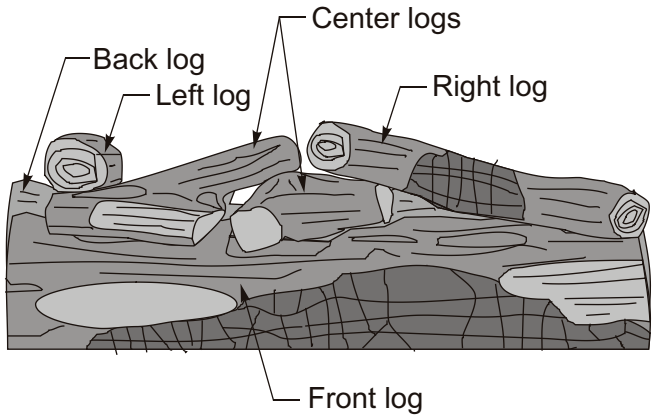


Figure 28. Log placement as seen from the front of the stove.

NOTES:

- If the logs are not placed properly, excessive sooting will result.
- The surface of the logs will crack due to the heat from the flames. This is a normal occurance.

Wiring

Gas Control and Pilot Wiring for optional Intermittent Pilot (-I models) Ignition

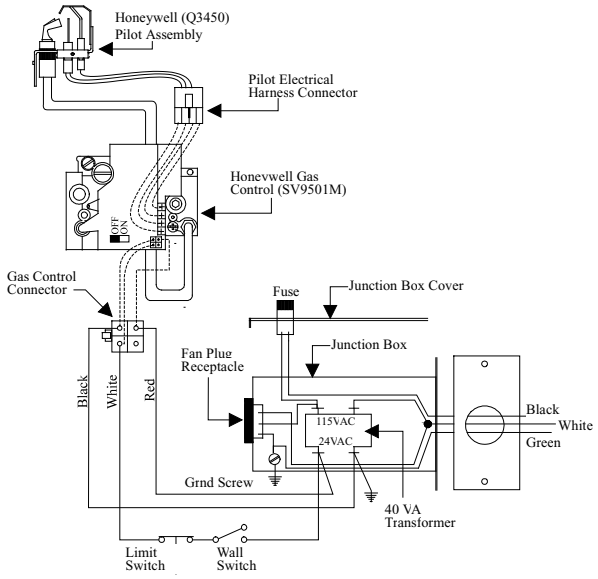


Figure 29. Wiring for the Rio Stove with Honeywell gas control and pilot.

Wiring for the optional Blower Kit

The Rio Steel Stove may be equipped with an optional variable speed blower kit (Part #RFK1080) for circulating additional heat into the living space.

Installations in Canada which employ the blower kit must be electrically grounded in accordance with CSA C22.1 Canadian Electrical Code Part 1 and/or Local Codes.

Installations in the USA which employ the blower kit must be grounded in accordance with local codes or, in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70-1987.

For more information see the Installation Guide included with the blower kit.

NOTE: If any of the original wire supplied with the appliance is replaced, it must be replaced with the same type, or its equivalent.

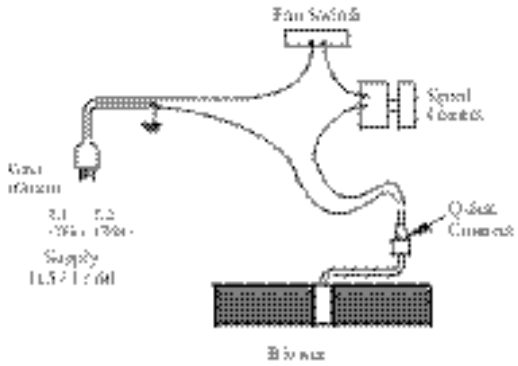


Figure 30a. Wiring for optional air circulating blower kit.

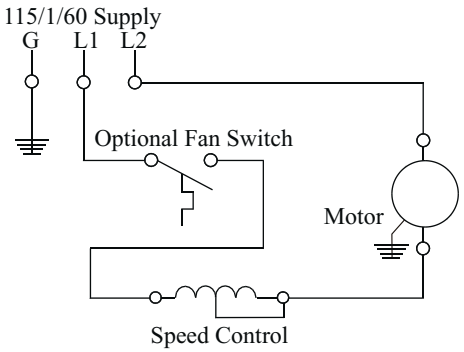


Figure 30b. Wiring schematic for optional blower kit.

Operation - Continuous Pilot Models

For Your Safety - READ BEFORE LIGHTING:

WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.

B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

What To Do If You Smell Gas:

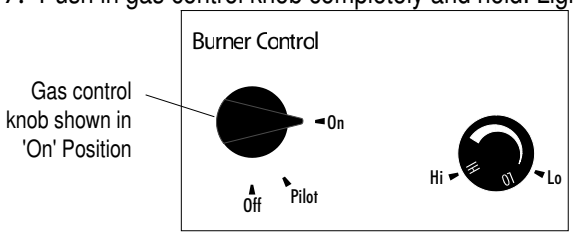
- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbour's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the Fire Department.

C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempt to repair may result in a fire or explosion.

D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system, and any gas control which has been under water.

Lighting Instructions:

1. STOP! Read the safety information above on this label.
2. Flip down lower brass trims.
3. Push in gas control knob and turn clockwise to "OFF."
4. Wait five (5) minutes to clear out any gas. Smell for gas, including near the floor. If you then smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.
5. Locate pilot burner (See illustration at right.) and follow steps below.
6. Turn knob on gas control counterclockwise to "PILOT."
7. Push in gas control knob completely and hold. Light with Piezo Igniter button. Continue to hold the control knob in for about (1) minute after the pilot is lit. Release the knob and it will pop back up. Pilot should remain lit. If it goes out repeat steps 3 through 8.
   - If knob does not pop up when released. Stop and immediately call your service technician or gas supplier.
   - If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.
8. Push in gas control knob and turn counterclockwise to "ON."
9. Flip up lower brass trim.
10. Turn on remote switch to ignite fire.



NOTE: Knob cannot be turned from "PILOT" to "OFF" unless knob is pushed in slightly. Do not force.

To Turn Off Gas To Appliance:

1. Turn off remote switch.
2. Flip down lower trim.
3. Push in gas control knob slightly and turn clockwise to "Off". Do not force.
4. Flip up lower trim.

Operation - Intermittent Pilot (-I) Models

For Your Safety - READ BEFORE LIGHTING:

WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

A. This appliance is equipped with an ignition system that lights the pilot burner automatically. Do not attempt to light the pilot by hand.

B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

What To Do If You Smell Gas:

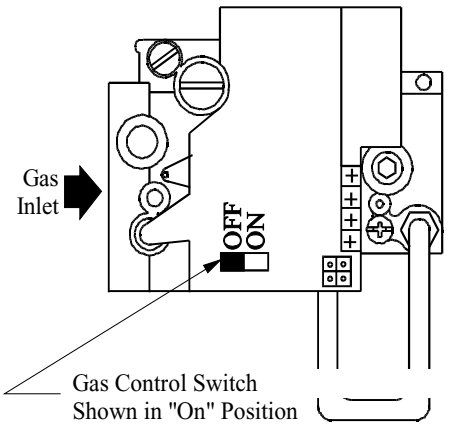
- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbour's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the Fire Department.

C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempt to repair may result in a fire or explosion.

D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system, and any gas control which has been under water.

Lighting Instructions:

1. STOP! Read the safety information above on this label.
2. Flip down lower brass trims.
3. Turn switch on the gas control to OFF".
4. Wait 5 minutes to clear out any gas. If you smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.
5. Turn switch on the gas control to "ON". NOTE: This unit is equipped with an ignition system that lights the pilot burner automatically. Do not attempt to light the pilot by hand.
6. Turn on wall switch.
7. Flip up lower brass trim.
8. If the fireplace does not operate, follow the instructions "To Turn Off Gas To Appliance" and call your service technician or gas supplier.



To Turn Off Gas To Appliance:

1. Turn off remote switch.
2. Flip down lower trim.
3. Turn the switch on the gas control to "Off".
4. Flip up lower trim.

Operation

Lighting Instructions

See pages 13 and 14.

Adjusting the Burner

Raising or lowering the Flame Height

Rio Stoves are equipped with an adjustable burner, allowing you to raise or lower the flames. To adjust the flames, locate the black knob marked 'Flame Control', in the centre of thecontrol panel (See Figure 31).

- To raise the flame height, turn the black knob marked 'Flame Control' counterclockwise.
- To lower the flame height, turn clockwise.

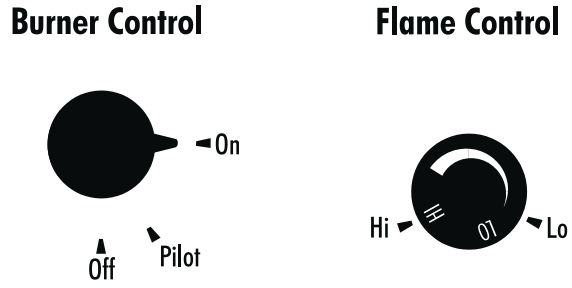


Figure 31. Hi-Lo' Adjustment on the Rio Stove's gas valve.

Maintenance

CAUTIONS

- Fireplace gas control must be in the “OFF” position and pilot and main burners extinguished when cleaning appliance with a vacuum.
- Doors and logs can get very hot. Handle only when cool.

General

- Have the fireplace installation inspected yearly, including a visual check of the vent system, the burner and the pilot flame. For your convenience a 1/8" manifold pressure tap is supplied on the gas valve for a test gauge connection. See Figure 28.
- For Natural Gas this appliance requires a minimum inlet pressure of 5.5" W.C. and a manifold pressure of 3.5" W.C.
- For Propane Gas this appliance requires a minimum inlet pressure of 11" W.C. and a manifold pressure of 10" W.C.
- Always keep the fireplace area clear and free of combustible materials, as well as gasoline and other flammable vapours and liquids.
- Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

Cleaning

When the fireplace is first activated, there may be some smoking and a visible film may be left on the glass. This is a normal condition, and is the result of burning of protective coatings on new metal.

- Glass must be cleaned periodically to remove any film (which is a normal biproduct of combustion) which may be visible. Film can easily be removed by removing the door, as shown on page 11. Handle the door carefully, and clean it with non-abrasive glass cleaners. One of the most effective products is Kel Kem.
- Silicone seals on inner door during initial firing will "off gas", leaving a visual deposit of a white substance on combustion chamber walls. This can easily be removed using normal household products.
- Use a vacuum cleaner or whisk broom to keep the control compartment, burner, and firebox free from dust and lint.
- Logs may be cleaned periodically with a vacuum to remove soot

WARNING:

Do not attempt to clean glass when hot.

Do not clean glass with abrasive materials as any glass etching may cause premature glass failure.

Maintenance

Gas Control Valve

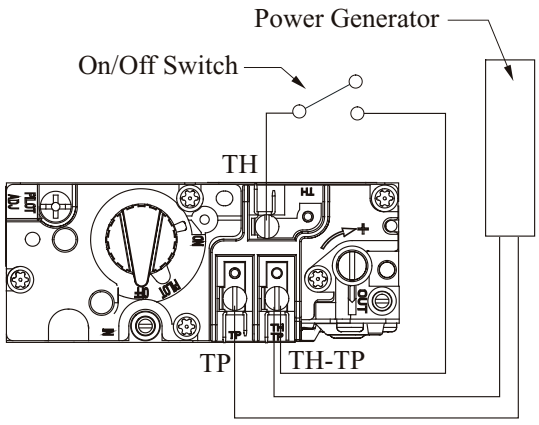


Figure 32. Honeywell VS8520 gas valve.

Pilot Burner Adjustment

1. Locate Pilot Adjustment Screw. (See figure 32.)
2. Adjust pilot screw to provide properly sized flame as shown in figure 33).
3. After installing or servicing, leak test with a soap solution with main burner on. Coat pipe and tubing joints, gasket etc. with soap solution. Bubbles indicate leaks. Tighten any areas where the bubbles appear until the bubbling stops completely.

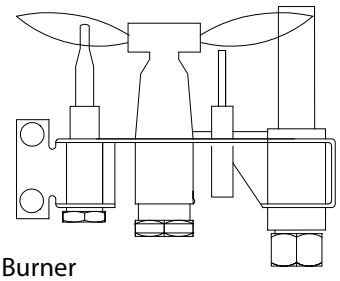


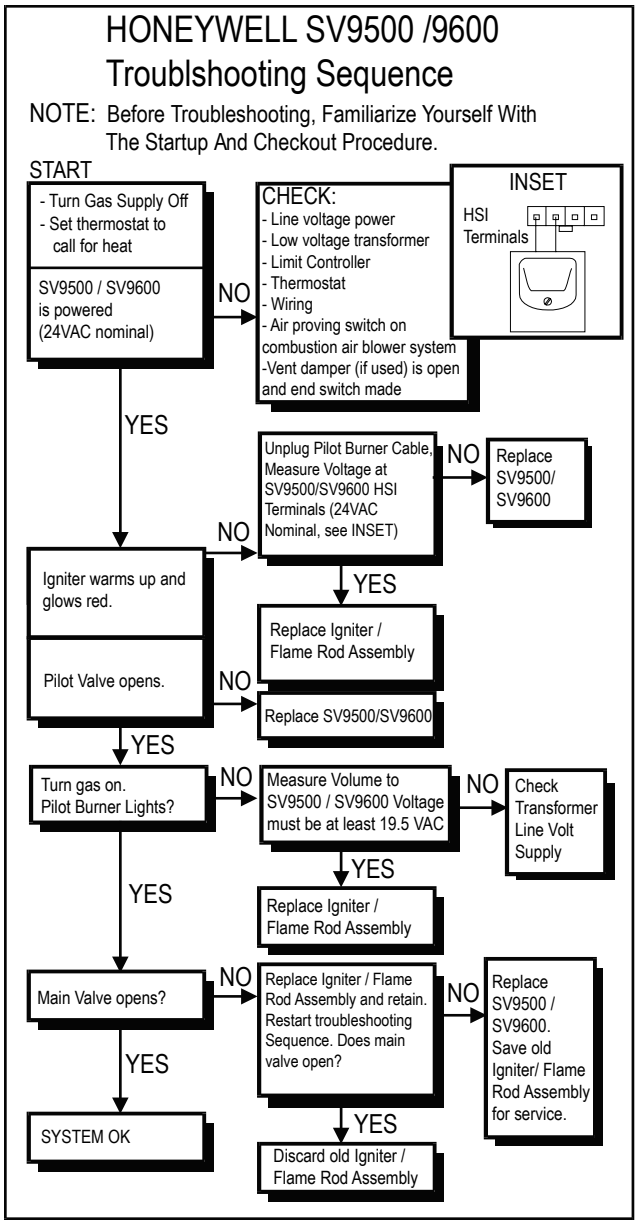
Figure 33. Pilot Burner

Troubleshooting

The following is a troubleshooting chart of possible problems:

PROBLEM	CORRECTIVE ACTION
Noisy Pilot Flame	Locate pilot adjustement screw on gas control valve. Flame is decreased by turning adjustment screw clockwise.
Pilot won't ignite	Disconnect remote wires and try to light pilot. If pilot now works, remote connections are faulty. Check wiring diagram figure 32.
Main burner will not light	1. Check wiring (see figure 32). 2. Check wall switch for proper connection.

Troubleshooting


HONEYWELL SV9500 /9600
Troublshooting Sequence
NOTE: Before Troubleshooting, Familiarize Yourself With The Startup And Checkout Procedure.
START
- Turn Gas Supply Off
- Set thermostat to call for heat
SV9500 / SV9600 is powered (24VAC nominal)
NO
CHECK:
- Line voltage power
- Low voltage transformer
- Limit Controller
- Thermostat
- Wiring
- Air proving switch on combustion air blower system
-Vent damper (if used) is open and end switch made
INSET
HSI Terminals
YES
Unplug Pilot Burner Cable, Measure Voltage at SV9500/SV9600 HSI Terminals (24VAC Nominal, see INSET)
NO
Replace SV9500/ SV9600
NO
YES
Igniter warms up and glows red.
Pilot Valve opens.
NO
Replace Igniter / Flame Rod Assembly
Replace SV9500/SV9600
YES
Turn gas on. Pilot Burner Lights?
NO
Measure Volume to SV9500 / SV9600 Voltage must be at least 19.5 VAC
NO
Check Transformer Line Volt Supply
YES
YES
Replace Igniter / Flame Rod Assembly
Main Valve opens?
NO
Replace Igniter / Flame Rod Assembly and retain. Restart troubleshooting Sequence. Does main valve open?
NO
Replace SV9500 / SV9600. Save old Igniter/ Flame Rod Assembly for service.
YES
YES
SYSTEM OK
YES
Discard old Igniter / Flame Rod Assembly

If your fireplace still does not operate correctly, consult your dealer or the manufacturer.

All service and repairs should be performed by a qualified agency.

All spare parts, optional fans (see optional fan instruction guide), and optional trim finishes are available from the manufacturer or your local dealer.

Warranty

The Warranty

The Companies warrants the DelRay Gas Appliance to be free from defects in materials and workmanship at the time of manufacture. On the DelRay, there is a ten-year warranty on the firebox and its components, a five-year warranty on the main burner, and a one-year warranty on the gas control valve, pilot burner and fibre logs. Glass, plated/painted finishes, and refractory lining are exempt.

Remedy And Exclusions

The coverage of this Warranty is limited to all components of the Gas Appliance manufactured by The Companies.

This Warranty only covers DelRay Gas Appliances installed in the United States or Canada.

If the components of the Gas Appliance covered by this Warranty are found to be defective within the time frame stated (see The Companies right of investigation outlined below). The Companies will, at its option, replace or repair defective components of the Gas Appliance manufactured by The Companies at no charge, and will also pay for reasonable labour costs incurred in replacing or repairing components. If repair or replacement is not commercially practical, The Companies will, at its option, refund the purchase price of the DelRay Gas Appliance.

This Warranty covers only parts and labour as provided above. In no case shall The Companies be responsible for materials, components, or construction which are not manufactured or supplied by The Companies, or for the labour necessary to install, repair or remove such materials, components or construction. All replacement or repair components will be shipped F.O.B. the nearest The Companies factory.

Qualifications To The Warranty

The Gas Appliance Warranty outlined above is further subject to the following qualifications:

(1) The Gas Appliance must be installed in accordance with The Companies installation instructions and local building codes. The Warranty on this DelRay Gas Appliance covers only the component parts manufactured by The Companies. The use of components manufactured by others with this DelRay Gas Appliance could create serious safety hazards, may result in the denial of certification by recognized national safety agencies, and could be in violation of local building codes. This warranty does not cover any damages occurring from the use of any components not manufactured or supplied by The Companies

(2) The DelRay Gas Appliance must be subjected to normal use. The Gas Appliances are designed to burn gas only. Burning conventional fireplace fuels such as wood, coal or any other solid fuel will cause damage to the Gas Appliance, will produce excessive temperatures and will result in a fire hazard.

Limitations On Liability

It is expressly agreed and understood that The Companies sole obligation, and purchaser's exclusive remedy under this Warranty, under any other warranty, expressed or implied, or in contract, tort or otherwise, shall be limited to replacement, repair, or refund, as specified above.

In no event shall The Companies be responsible for any incidental or consequential damages caused by defects in its products, whether such damage occurs or is discovered before or after replacement or repair, and whether or not such damage is caused by The Companies negligence. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. The duration of any implied warranty with respect to this DelRay Gas Appliance is limited to the duration of the foregoing warranty. Some states do not allow limitation on how long an implied warranty lasts, so the above may not apply to you.

Investigation Of Claims Against Warranty

The Companies reserves the right to investigate any and all claims against this Warranty and to decide upon method of settlement.

The Companies Are Not Responsible For Work Done Without Written Consent

The Companies shall in no event be responsible for any warranty work done without first obtaining The Companies written consent.

Dealers Have No Authority To Alter This Warranty

The Companies employees and dealers have no authority to make any warranties nor to authorize any remedies in addition to or inconsistent with those stated above.

How To Register A Claim Against Warranty

In order for any claim under this Warranty to be valid, The Companies must be notified of the claimed defect in writing or by telephone, as soon as reasonably possible after the defect is discovered. Claims against this Warranty in writing should include the date of installation, and a description of the defect.

Other Rights

Canadian Heating Products Inc. and/or Montigo DelRay Corp. reserves the right to make changes at any time, without notice, in design, materials, specifications, prices and also to discontinue colors, styles and products.

Appendix A - Accessories and Vent Components

Accessories

Item	Description		Quantity	Order Code
1	Wireless Remote Control		1	RX-10
2	Millivolt Thermostat	Programmable	1	
3	Millivolt Thermostat	Non-programmable	1	
4	Variable Speed Blower Kit	Includes heat sensor, variable speed control.	1	RFK1080

Vent Kits

Item	Description	Quantity	Part #
Direct Vent - Rear Vent Kit			FSTK01
5	Snorkel Termination, Freestanding	1	
6	Outer wall plate	1	
7	Inner wall plate	1	
8	Cover plate	1	
9	FST11 18" Vent Pipe, Black (std. female/female)	1	
10	Cover Plate for Stove vent collar, & screws	1	
11	Self Tapping 1/2" screws	12	
12	Wood Screws	4	
13	Touch-up Paint, Black	1 can	
14	Rain Shield	1	
Direct Vent - Through the Wall Kit			FSTK02
15	Top Vent `Conversion Box'	1	
16	Black Stove Pipe (std. female/female)	3	
17	Black Slip Section (oversize female/female)	1	
18	Black 90° Elbow (male/male)	1	
19	Brass Decorator Ring	4	
20	Screw, Phillips, Black (1 per brass ring)	4	
21	Decorative Wall/Ceiling Plate	1	
22	Flex Venting (4" dia.) incl. 1 flex vent collar	1x6"	
23	Flex Vent Collar (field installed)	1	
24	Pipe Joint Compound	1	
25	Touch-up Paint, Black	1 can	
26	Spacer Springs	3	
27	1 1/4" Drywall Screws	4	
28	Self Tapping 1/2" Screws	24	
29	Termination	1	
B-Vent Kit			FSTK03
30	Draft Hood Assembly, Painted(std. female dia.)	1	
Direct Vent - Through the Roof Kit			FSTK04
31	Top Vent 'Conversion Box'	1	
32	Black Stove Pipe (std. female/female)	2	
33	Black Slip Section(oversize female/female)	1	
34	Brass Decorator Ring	3	
35	Screw, 3/8" Phillips, Black (one per brass ring)	3	
36	Ceiling Box	1	
37	Flex Venting (4" dia.) - includes 1 flex vent collar	1 x 4'	
38	Flex Vent Collar (field installed)	1	
39	Pipe joint compound	1	
40	Touch-up Paint, Black	1	
41	Spacer Springs	3	

Vent Components - Avail. Individually

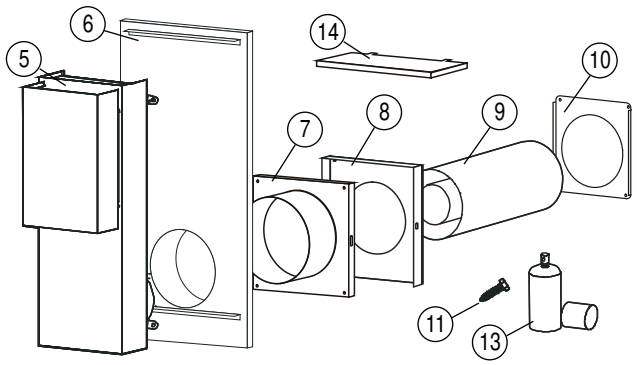
Item	Quantity	Part #
Black Stove Pipe - 24" (std. female/female)	1	FST05
Black Stove Pipe - 18" (std. female/female)	1	FST11
Black Slip Section - 24" (oversize female/female)	1	FST06
Black 90° Elbow (male/male)	1	MEL9MB
Brass Decorator Ring	1	FSTR01
Decorative Wall Plate	1	FST07
Black Decorative Ceiling Box	1	FST10
Top Vent `Conversion Box'	1	FST04
Flex Venting (4" dia.) incl. 1 flex vent collar	1x6"	FST08
Flex Vent Collar (field installed)	1	FST09
Spacer Springs	3	SPS
Black Phillips Screws	6	RHW2045
Black Self-Tapping Screws	24	RHW2099
Pipe Joint Compound	1	RIN2004
Touch-up Paint, Black	1 can	PAINT01
Touch-up Paint, Charcoal Grey	1 can	PAINT02

For available Standard Series (4/7") Vent Components, refer to our current price list.

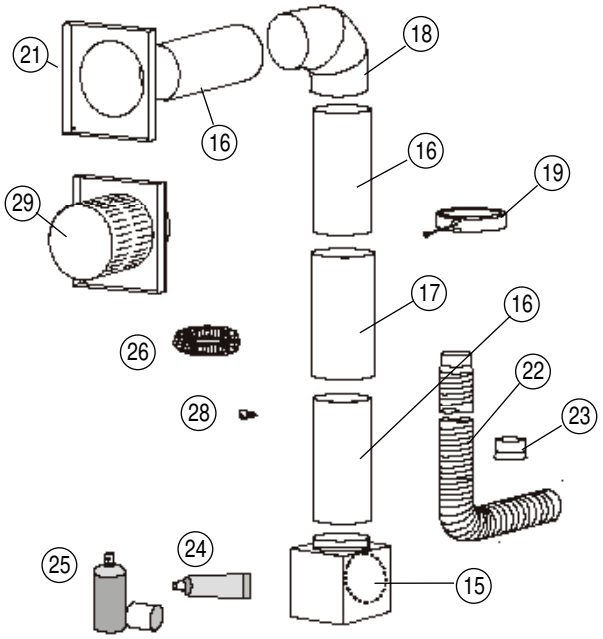
Notes

Appendix A - Accessories and Vent Components

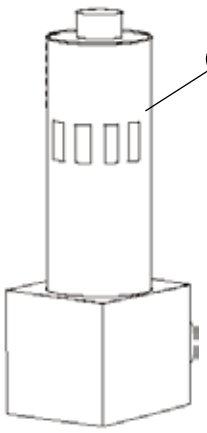
Direct Vent - Rear Vent Kit



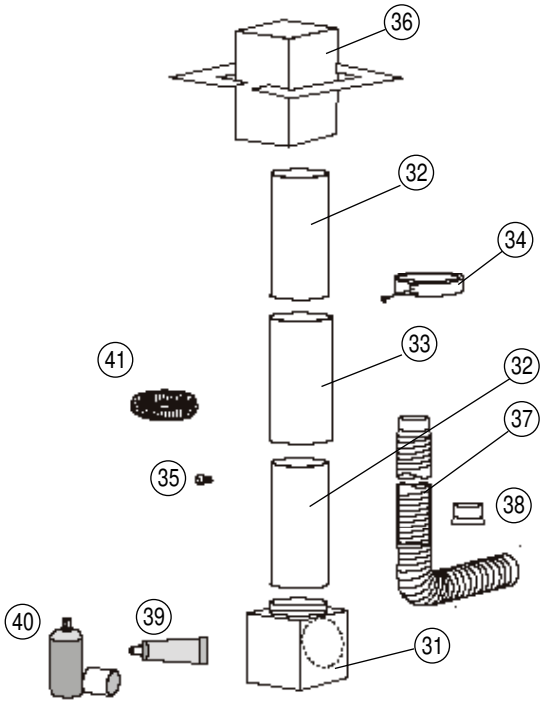
Direct Vent - Through-the-Wall Kit



B-Vent Kit



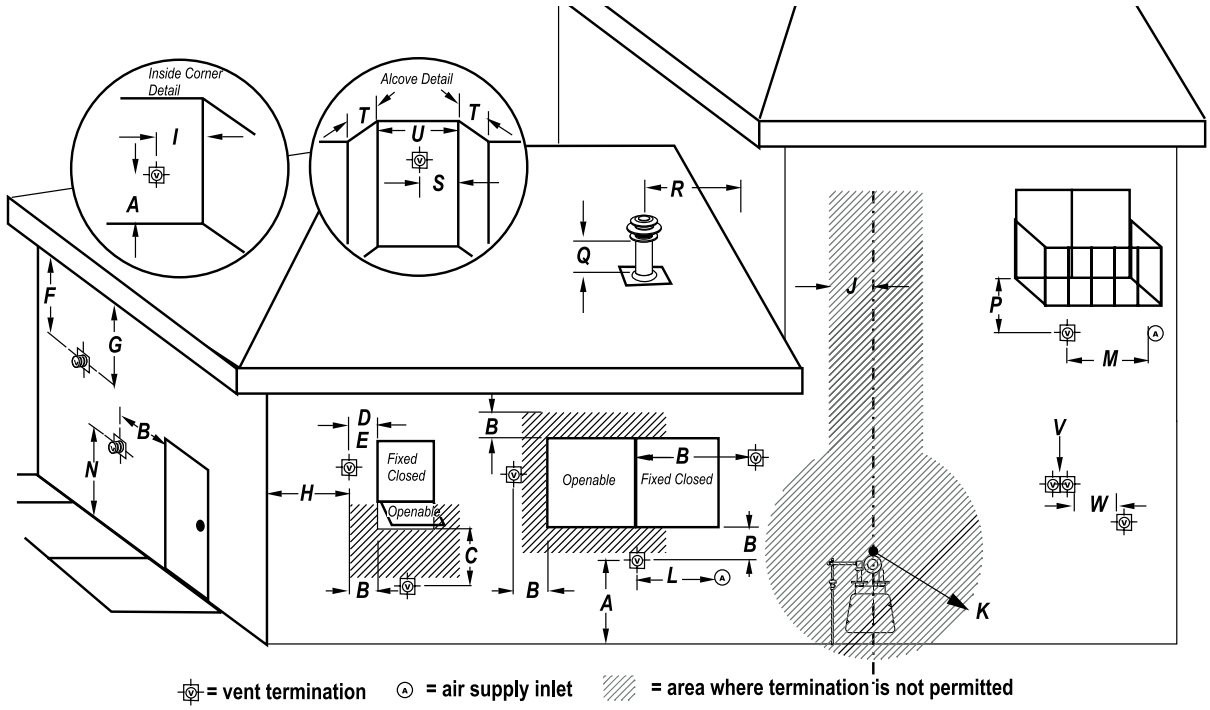
Direct Vent - Through-the-Roof Kit



Spare Parts List

Part Description	Part No.
NG Gas Valve	RGC1021
LP Gas Valve	RGC1022
NG Pilot	RPA019
LP Pilot	RPA019A
Door	RDRFS1
Front Burner NG	RBT1089
Rear Burner LPG	RBT1090
Front Orifice NG	RBT1091
Rear Orifice LPG	RBT1092
Logs	RLGS15

Appendix B - Termination Locations



A = clearance to the termination frame above grade, veranda, porch, deck, or balcony [16 inches (41 cm) minimum]

B = clearance to door, or sides and top of window, that may be opened [16 inches (41 cm) minimum for appliances ≤100 000 BTU/H (30kW)]

C = clearance to bottom of window that may be opened horizontally [36 inches (92 cm) minimum for appliances ≤100 000 BTU/H (30kW)]

D = no clearance to permanently closed window when installed with approved glass penetration termination

E = clearance to permanently closed window [16 inches 41 cm recommended to prevent condensation on window]

F = vertical clearance to ventilated soffit located above the termination within a horizontal distance of 2 feet (61 cm) from the centreline of the termination [22 inches (56 cm) minimum]

G = clearance to unventilated soffit
[16inches (41 cm) minimum to non-combustibles]
[22 inches (56 cm) minimum to combustibles]

H = clearance to outside corner [9 inches (23 cm) minimum]

I = clearance to inside corner [12 inches (31 cm) minimum]

J = * not to be installed above a meter/regulator assembly within 40" (103 cm) horizontally from the centreline of the regulator

K = clearance to service regulator vent outlet [3 feet minimum in the United States] [*6 feet (1.8 m) minimum in Canada]

L = clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other appliance [16 inches (41 cm) minimum for appliances ≤100 000 BTU/H (30kW)]

M = clearance to mechanical air supply inlet
both dwellings

‡ only permitted if veranda, porch, deck, or balcony has an open side that is equal to or greater than the depth of the enclosed area

* as specified in CGA B149 Installation Codes. Note: local Codes or Regulations may require different clearances
[*6 feet (1.8 m) minimum]

N = † clearance above paved sidewalk or a paved driveway located on public property [*7 feet (2.1 m) minimum]

P = clearance under veranda, porch, deck, or balcony
[16 inches (41 cm) minimum‡ to non-combustibles]
[22 inches (56 cm) minimum‡ to combustibles]

Q = clearance above a roof [24 inches (61 cm) minimum]

R = clearance to adjacent walls and neighbouring buildings
[18 inches (46 cm) minimum]

S = clearance from corner in recessed location
[12 inches (31 cm) minimum]

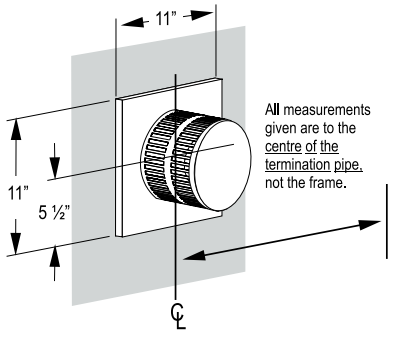
T = maximum depth in recessed location
[48 inches (122 cm) minimum]

U = minimum width for back wall of recessed location
[24 inches (61 cm) minimum]

V = no horizontal clearance between the frames of two terminations that are level.

W = horizontal clearance between the frames of two terminations that are not level. [36 inches (92 cm) minimum]

† a vent shall not terminate directly above a sidewalk or paved driveway which is located between two single family dwellings and serves



Appendix C - State of Massachusetts

Amendment

(Gas Fireplace / Equipment sold in the State of Massachusetts)
5.08: Modifications to NFPA-54, Chapter 10

(1) Revise NFPA-54 section 10.5.4.2 by adding a second exception as follows:
Existing chimneys shall be permitted to have their use continued when a gas conversion burner is installed, and shall be equipped with a manually reset device that will automatically shut off the gas to the burner in the event of a sustained back-draft.

(2) Revise 10.8.3 by adding the following additional requirements:
(a) For all side wall horizontally vented gas fueled equipment installed in every dwelling, building or structure used in whole or in part for residential purposes, including those owned or operated by the Commonwealth and where the side wall exhaust vent termination is less than seven (7) feet above finished grade in the area of the venting, including but not limited to decks and porches, the following requirements shall be satisfied:

1. INSTALLATION OF CARBON MONOXIDE DETECTORS. At the time of installation of the side wall horizontal vented gas fueled equipment, the installing plumber or gas fitter shall observe that a hard wired carbon monoxide detector with an alarm and battery back-up is installed on the floor level where the gas equipment is to be installed. In addition, the installing plumber or gas fitter shall observe that a battery operated or hard wired carbon monoxide detector with an alarm is installed on each additional level of the dwelling, building or structure served by the side wall horizontal vented gas fueled equipment. It shall be the responsibility of the property owner to secure the services of qualified licensed professionals for the installation of hard wired carbon monoxide detectors
a. In the event that the side wall horizontally vented gas fueled equipment is installed in a crawl space or an attic, the hard wired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level.
b. In the event that the requirements of this subdivision can not be met at the time of completion of installation, the owner shall have a period of thirty (30) days to comply with the above requirements; provided, however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed.

2. APPROVED CARBON MONOXIDE DETECTORS. Each carbon monoxide detector as required in accordance with the above provisions shall comply with NFPA 720 and be ANSI/UL 2034 listed and IAS certified.

3. SIGNAGE. A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas fueled heating appliance or equipment. The sign shall read, in print size no less than one-half (1/2) inch in size, “GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS”.

4. INSPECTION. The state or local gas inspector of the side wall horizontally vented gas fueled equipment shall not approve the installation unless, upon inspection, the inspector observes carbon monoxide detectors and signage installed in accordance with the provisions of 248 CMR 5.08(2)(a)1 through 4.
(b) EXEMPTIONS: The following equipment is exempt from 248 CMR 5.08(2)(a)1 through 4:

1. The equipment listed in Chapter 10 entitled “Equipment Not Required To Be Vented” in the most current edition of NFPA 54 as adopted by the Board; and
2. Product Approved side wall horizontally vented gas fueled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.

(c) MANUFACTURER REQUIREMENTS - GAS EQUIPMENT VENTING SYSTEM PROVIDED. When the manufacturer of Product Approved side wall horizontally vented gas equipment provides a venting system design or venting system components with the equipment, the instructions provided by the manufacturer for installation of the equipment and the venting system shall include:
1. Detailed instructions for the installation of the venting system design or the venting system components; and
2. A complete parts list for the venting system design or venting system.

(d) MANUFACTURER REQUIREMENTS - GAS EQUIPMENT VENTING SYSTEM NOT PROVIDED. When the manufacturer of a Product Approved side wall horizontally vented gas fueled equipment does not provide the parts for venting the flue gases, but identifies “special venting systems”, the following requirements shall be satisfied by the manufacturer:
1. The referenced “special venting system” instructions shall be included with the appliance or equipment installation instructions; and

2. The “special venting systems” shall be Product Approved by the Board, and the instructions for that system shall include a parts list and detailed installation instructions.
(e) A copy of all installation instructions for all Product Approved side wall horizontally vented gas fueled equipment, all venting instructions, all parts lists for venting instructions, and/or all venting design instructions shall remain with the appliance or equipment at the completion of the installation.

(3) After NFPA-54 section 10.10.4.2 add a new section 10.10.4.3 as follows:
When more than four gas appliances are to be vented through a common gas vent or common horizontal vent manifold, a plan of the proposed vent installation shall be submitted to the Inspector and the serving gas supplier for review and approval.

Extraction from: Massachusets Rules and Regulations
5.00: Amendments To 2002 Edition Of ANSI Z223.1-NFPA-54

DelRay

Quality Gas Products by Montigo

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